The Insurance against the Energy Risk Could Promote Growth for the Shipping Company?

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***Abstract*-Economic reflections on the environment are relatively recent: The founder Article of the theory of natural resources in 1931 (price trends laws and comparison of the rates of extraction depending on the competition regime). The broader issues of management of scarce resources (oil) or renewable (fisheries) are an even more recent concern, but toward which the public is sensitized, as evidenced the rise of environmental concerns. That of global warming has considerable economic and political issues (Kyoto Protocol ...).**

Among commodity products in the world, oil is the mostly transported. Most of the oil flowing in the world is carried on specific ships, tankers. They can easily deliver large quantities of -either crude or refined -oil to places where they are needed, often following the same routes. The shipping of these products is done under conditions of strict security provided by the oil companies, ship-owners who have the ships and the states that register them.

Energy consumption by shipping is the source of many pollutants. Environmental risks associated with exporting and shipping of oil in particular can be very important. The resulting effects are diverse and often complex. For some of them (impacts on the built environment, visibility, vegetation: wildlife, health) it is however possible to give some quantification in physical terms. The monetary value of these effects can refer to their economic cost or to a "contingent valuation", and it raises some methodological difficulties. Today the risk is financial, social, physical, environmental and human. The shipping company must manage after identifying risks and knowing how to transfer them to insurers, sovereign states, take offs to the maritime adventure, as the sea still remains a wild world.

Although shipping is considered one of the means of transport that causes little harm to the environment, it may have important effects if standards are not observed or are not enforced.

Keywords-Oil pollution, tanker, externality, market failure, risk, regulation, free negotiation, insurance, growth, shipping, company.

I. INTRODUCTION

Companies are often increasingly concerned over the vulnerability results from the balance sheet. With regard to increased costs or reduced sales that are the source of expected results, companies are often faced with a number of risks and they are to manage knowledge. To remain competitive, we must: reduce costs, manage cash flow, smooth operating results of the volatility, identifying risk parameters etc...

In the energy fields, as the transport of oil exploration instead of consumption rather service provider business often faces the conclusion of a contract of marine insurance. Such an agreement obeys certain sensitive standard. Face the risks of sea crossing high energy product risk as oil and its derivatives, the insurance contract is a very useful and often present more difficulties that should be qualified.

The shipping company operates in an open global competitive context, said free rivalry. The sea trade uses important means of transport (ships increasingly gigantic) but every year many ships perished accidentally and despite the technical and human resources in place, new risks emerge (pollution, insecurity) or reappear (risk of war), new international conventions follow these events by trying to govern together and unify the world through free trade. Maritime transport, which reports to the Maritime Law is all about “sea risk, which requires solidarity -(not legal in the sense of the word) -between participants in the maritime shipping and a risk division , particularly since more goods that carried risks have been expensive ".... In origin, the Maritime Law has a new and original character (positive law) remarkable implementing institutions such as the general average, insurance, and Bottomry loan (in-existing nowadays) The shipping company has always tried to protect its interests in its relationship with shippers, Brussels Convention and the Protocols are amended so as to limit its cargo liability . Major maritime disasters have led States to react through international conventions: The Titanic disaster will lead to the SOLAS (Safety, ship classification and marine salvage), disasters lead to closer agreements on marine pollution, the introduction of the ISM Code and STCW regulations providing complementary constraints to the shipping.

II. HOW THE FIRM COULD MANAGE ITS ENVIRONMENT?

In our economies which are subject to globalization, the company relies on a strong sense of network interconnection. The exchanges with its environment (physical, technical, legal, economic, social, media ...) are irregular, and the dependencies are unavoidable (suppliers, economic and political conjuncture, public opinion, bad weather ...).

This environment in which various actors involved in different logical as well as the chance is unstable by definition, not entirely predictable. The company needs to know to make an ally. It will be all the stronger as soon as it will come into harmony with its environment, taming, anticipating his movements, adapting to draw from knowing the opportunities to create value required in a hyper competitive economy, for its survival.

In this context where risk-taking generates value and where the risks can simultaneously weaken or even destroy a business, risk management becomes essential.

III. WHAT IS THE RISK MANAGEMENT?

The term risk may have a variable meaning in economic and mathematical literature. According to the general economic sense, risk means variability of future results, which can also be gains. And this sense beyond insurance, where accepted risk is a potential loss, which will be partially or completely covered by the insurance .According to the two economists Knight (f.), and Arrow (k.) talking actual risk, when the consequences of an action or a phenomenon can be represented by a probability distribution. The orientation of the Arrow joined theory recognizes that human individuals have a natural aversion to risk, and that demand security concerns as much goods that people risk theory .For Arrow, some individuals may have a preference for the risk, or even contribute to its realization (moral risk insurance).And some people are more than others, given the assumption of risk and fraud.

IV. RISK ASSESSMENT OF OIL/NUCLEAR MARITIME TRANSPORTATION

The operations of major industrialized economies are largely dependent on the availability of oil/nuclear resources. Places of production and consumption of this raw material are often geographically total disconnection. The shipping of oil remains the least expensive means of transport. This activity is risky and complex. "Risky" since accidents are a source of environmental damage (and economic) considerable, large enough to obscure the rare nature of such disasters. It's "Complex", because there are many actors and intermediaries, often of different nationalities and sometimes difficult to identify. The management system runs the risk of both problems.

The steady increase in the price of fuel/oil -- and the probable introduction of either a carbon-emissions trading scheme or a related tax -- now presents the possibility that nuclear propulsion could be more competitive.

The exact nature and duration of any impacts from an oil spill depend on a number of factors. These include the type and the amount of oil and its behavior once spilled; the physical characteristics of the affected area; weather conditions and season; the type and effectiveness of the clean-up response; the biological and economic characteristics of the area and their sensitivity to oil pollution. Typical effects on marine organisms range across a spectrum from toxicity (especially for light oils and other products) to smothering (heavier oils and weathered residues).

According to some, the practice of discharge into the sea and radioactive wastes including liquid wastes "can not generalize without potentially representing an early contamination of the globe"

We met in the by-products from mining operations during the purification of uranium ore. They also come from preparation plants and nuclear fuel processing, isotope separation plants or factories processing of spent fuel and nuclear powered vehicles and especially the marine gear.

This raises the problem of disposal of these wastes. To this end, people are beginning to use the sea as part diluents.

The nuclear risk is characterized in part by a very low probability of occurrence of a disaster due to the high level of quality control technique of possible risks

Because of its considerable size and immense volume, the sea, commonly regarded as the ideal discharge, may have seemed an ideal medium for the disposal of radioactive waste. We thought it was possible to dilute or disperse the waste in marine areas, without much danger, dilution and dispersion may be sufficient safe factors. In fact, "every day in several parts of the world, waste water containing small quantities of radio nuclides frequently discharged into the sea, specially designed containers containing radioactive wastes were dumped.

Risk is an important concept particularly in the fields of industry, environment (industrial risks, major risks), finance, law, health, and of course insurance.

Compared to other energies, the success of the petroleum energy is particularly related to the ease of transportation.

Dealing with the maritime transportation of crude oil and petroleum products has become a problem of major international concern due to the potential of environmental pollution created by oil spill incidents.

Maritime transportation accidents are relatively common occurrences compared to more frequently analyzed contributors to public risk. Yet research on maritime safety and pollution incidents has not been guided by a systematic, risk-based approach. Maritime shipping accidents can be analyzed using event trees to group the accidents into "bins," or groups, of similar characteristics such as type of goods, location of accident (e.g., port, inland channel), kind of accident (e.g., fire, collision, grounding), and size of release. The importance of specific types of events to each accident bin can be quantified. Then the overall importance of accident events to risk can be estimated by weighting the events' individual bin importance measures by the risk associated with each accident bin

Managing risks associated with the energy industry is becoming increasingly complicated due to factors such as government regulations, public policy, financial concerns, and energy resource scarcity.

Parallel to the decision-making, risk management involves the assessment and anticipation of risks.

An energy risk management assessment typically involves several steps. The first step requires identifying all possible energy threats. Once potential energy threats have been identified, the risks associated with these threats are usually quantified and prioritized. The final step in an energy risk management assessment usually entails finding ways to address the risk. Solutions may include reducing the energy risks, monitoring. and systematic collection of data to trigger alerts.

V. POLLUTION IS A TRUE MODE OF EXTERNALITY

The externality characterizes a situation where the economic action of an agent provides advantages (positive externalities) or disadvantages (negative externalities) to one or many other agents, such interdependence finds no adjustment on the market.

When a tanker empties its tanks in the international waters or when toxic smokes degrade the air quality, officials embarrass fishermen and inhabitants without spontaneously setting any price for such nuisances.

In case of externalities the price system ceases to carry on its function of information and incitement, it does not guide the agents towards more socially optimal decisions which may lead to various forms of inefficiency in the organization \ activities of production and consumption.

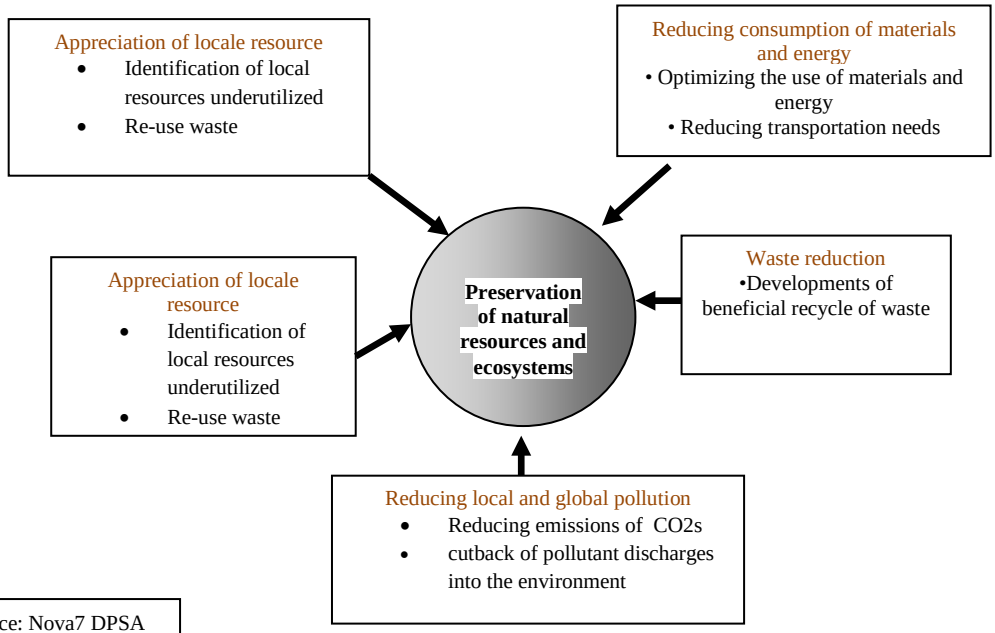
The exploration and production of oil and gas and the energical infrastructure projects associated with it are increasingly taking place in the world, they influence the diversity of environmental parameters and socio-economic from the Arctic 'to tropical and humid regions. The activities of the energy sector are by their nature complex and risky. They affect a variety of biodiversity, health and safety which should open a social debate about the factors of geological, political and economic risks.

Worldwide, operators require the highest levels ever of environmental and social performance of industry.

Consequently, oil and gas companies are being exposed to a steady proliferation of policies, laws, guidelines and other standards relevant to their activities.

VI. CONTRIBUTIONS IN TERMS OF ENVIRONMENTAL SUSTAINABILITY

The contribution of industrial ecology in terms of environmental sustainability can be summarized by a reduced consumption of natural resources (biomass, fossil fuels, minerals ...) and emissions per unit of riches created in the sea.



Source: Nova7 DPSA

VII. EXTERNALITIES AND THE REGULATORY APPROACH

An important solution to the problem of environmental pollution is based on a conception of the kingly state. It advocates to the use of administrative regulations of activities causing externalities through taxation permissions

We shall introduce here the concept of Pigouvian taxes, named after the British economist Arthur C. Pigou (1877-1959) who first, proposed to tax externalities in the environmental field. It aims to internalize the external costs or damages that the firm imposes on society and -the environment. With this tax, beard in mind, is not a tax but a price, the producer takes into account not only its individual costs of production but also its social costs (externalities) caused by its operations. The problem of course is to quantify the damage in monetary units. This estimate is very difficult in practice and the Pigouvian tax, optimal theoretical tool, can not be applied in this form. The concept, however, provided a theoretical basis for economic instruments increasingly used in OECD countries, such as taxes, fees, deposit systems, the financial markets or the creation of a "permit to issue "(" rights to pollute "). All these instruments have the advantage of giving a price to the pollution and thus lead to a better allocation of resources.

However there are two opposite views here, on the one hand, economists in favour of active intervention of the state (tax or regulatory approaches) and on the other hand, economists advocating free negotiation between polluters and the polluted (Contractual approach, and mechanism of pollution rights).

If there is uncertainty about the future effects of a suspicious activity, the precautionary principle is applicable only to avoid irreversible catastrophy. This principle is to take protective measures without waiting for scientific certainty (to the greenhouse effect, immediate ban on CFCs, for example).

A lower overall cost of fighting against pollution in relation to the establishment of pollution norms: tax is individually applied to the activity level of each firm, while the norms are uniformly applied, without taking into consideration the marginal costs of each firm.

Compared to the standard, the tax is a permanent incentive to reduce emissions. So when the state imposes an emission standard, the polluter-friendly law has any ambition to achieve this standard. In this case, the polluter has no incentive to do better than the standard (except for matters of commercial images).

In contrast, the tax provides a double permanent incentive struggle against pollution and technological innovation in this field. On the one hand, the tax induces a further reduction of emissions so that technical progress no longer benefits as a single polluter, but the community too. On the other hand, in the presence of tax, technical progress allows the polluter to perform a dual economy. (Cost-saving treatment and tax saving):

VIII. ENVIRONMENTAL TAXES

The principle of the polluter-payer (PPP) oblige the generator of the externality to bear the social costs of its actions to realize an effective Pareto equilibrium The administration should impose a tax on the externality in order to restore equality between costs social and private costs.

Indeed, in a context of pure and perfect concurrence, the selling price of the goods implicated in the production of the externality must reflect the total social cost that imposes to society.

Thus, all information will be included in the new price.

IX. THE MECHANISM:

Let's suppose that the tanker ship A supports a tax unit t_A of the amount of externality (causing an oil spill pollution) which it generates(E_A).

$$\begin{cases} Max\ \pi_A(q_1, q_2, \dots q_n, E_A) = \sum_{i=1}^{i=n} p_i q_i - t_A E_A \\ subject\ to\ \ F_A(q_1, q_2, \dots q_n, E_A) = 0 \quad (\lambda_A) \end{cases}$$

The first order conditions of the program lead to

$$\begin{cases} p_i = \lambda_A \dfrac{\partial F_A}{\partial q_i} \\ t_A = -\lambda_A \dfrac{\partial F_A}{\partial E_A} \end{cases}$$

The correspondence between the social optimum and decentralized equilibrium is released if and only if:

$$t_A = -\sum_{i=1}^{i=n} \lambda_j \alpha_j \frac{\partial U_j}{\partial E_j}$$

with

$$\frac{\partial U_j}{\partial E_j} \leq 0$$

As so $\lambda_j = \lambda_A$ et $p_i = \alpha_i$.

The optimal unit tax imposed on the tanker ship A corresponds therefore to the sum of marginal damages that the externality imposed to j consumers, evaluated at the optimum, and expressed in monetary units via the inverse of the marginal utility of income λ_j.

X. THE FREE NEGOTIATION BETWEEN THE AGENTS

Ronald Coase, demonstrating that government intervention is not automatically required; he also highlights the true foundation of such an intervention. The state action is justified when the high number of partners and / or complexity of externalities involve entail transaction costs so that no mutually beneficial agreement and establishing the optimal allocation of resources can not be spontaneously negotiated.

The Coase Theory also is read as follows. If property rights are fully defined, if transaction costs are zero and if the information concerned is perfect agents, negotiation among these agents enables a situation of Pareto-optimal. In addition, if the distribution of property rights does not generate income effect, the optimum obtained will be the same, whatever the structure of property rights is.

The invalidity of the income effect related to the allocation of property rights: suppose that the Stationery initially owns a River. If this right is removed to be attributed to the water treatment plant, it sees its economic situation improve (increase in its "income" in the broadest sense). Say that the income effect is zero; this change has no effect on its marginal willingness to pay for a less important pollution. Under these conditions, bargaining between the two firms will lead to the same result (Pareto optimal) as Stationery has the right to pollute the river or the treatment plant has the right for a clean river. Coasian solution to the problem of externalities is a "market" procedure of the internalization of externalities-, which means that a market of externality rights has to be created. This procedure relieves the state to intervene, apart from ensuring respect for property rights.

So as this bargaining can take place, it is necessary that the rights of agents are clearly defined. In the case of the factory that pollutes a river, it is about who owns the rights to the river water. Do they belong to river users, who are then entitled to a clean river? Or do they belong to the company, which then has the right to pollute the river? If property rights are well

XI. THE SCOPE OF MARINE INSURANCE AGAINST POLLUTION

The concept of risk premium is useful to characterize the extent of risk aversion.

The concept of risk premium is useful to characterize the extent of risk aversion. Indeed if $U(C_L)$ is the utility function where C_L is the amount of compensation in case of a loss we have; $U(E(C_L)$ is the utility of expectancy of the chosen model.

$E(U(C_L))$ is the expectancy of the utility of the chosen model U is the utility function.

a) If $U\big(E(C_L)\big) < E(U(C_L))$ the agent is an amateur of risk
b) If $U\big(E(C_L)\big) = E(U(C_L))$ the agent is neutral to risk
c) If $U\big(E(C_L)\big) > E(U(C_L))$ the agent is dislikes risk.

And $E_o(C_L) \leq E(C_L)$ with $E(C_L)$ compensation expectancy C_L.

The difference $\sigma(C_L) = E(C_L) - E_o(C_L)$ is the risk premium associated with: C_L it is the amount which the agent is ready to withdraw (in terms of compensation expectancy) to remove any risk.

$$U[E(C_L) - \sigma(C_L)] = E(U(C_L)$$

Suppose that the value of petroleum product transported by sea is V

And an insurance agency dealing with oil sea freight offers its clients who are carriers a choice model between two possibilities Compensation $(V + \partial)$ with probability $\frac{1}{2}$ or compensation $(V - \partial)$ with the same probability (is a small sum compared to). The expected utility of such compensation shall be:

$$EU(C_L) = \frac{1}{2}U(V + \partial) + \frac{1}{2}U(V - \partial)$$

Assuming that U is a double differentiable function and very small for V, the Taylor development to order 2 gives us

$$U(V + \partial) = U(V) + \partial\, U'(V) + \frac{\partial^2}{2}U''(V)$$

And

$$U(V - \partial) = U(V) - \partial\, U'(V) + \frac{\partial^2}{2}U''(V)$$

therefore is

$$EU(C_L) = U(V) + \frac{\partial^2}{2}U''(V)$$

The risk premium

$$U[V - \sigma(C_L)] = U(V) + \frac{\partial^2}{2}U''(V)$$

If ∂ is small, $\sigma(C_L)$ will also be: So $U[(V - \sigma(C_L)] = U(V) - \sigma(C_L)U'(V)$

and

$$\sigma(C_L) = \frac{U''(V)}{U'(V)} \times \frac{\partial^2}{2}$$

∂^2 is nothing as variance of compensation. So for small risks, the risk premium is proportional to the variance of compensation,

This example obviously shows that the bad carriers of pollutants by sea who do not respect international safety standards difficult cannot find easily an insurer that will offer him a remunerative premium.

The anti-selection is the issue of insurance which consists of, in exchange of a perception of quote-part or premium , providing a predefined financial service to an individual, an association or a company during a risk period. Thus, the main part -the insurer- will propose a maritime contract. For his contract he fixes a unique price p, because he cannot know the quality of his customers (good or bad carriers). In other words, let's simplify it as the cost of the median oil ship accidents.

From the point of view of a potential customer, this contract is even more interesting than is a bad carrier (the cost of the accidents becomes higher than the price of insurance).

Among all customers, the insurer will ensure all failing carriers; those whose accidents cost more than p, and only part of the goods which can bear the cost of their infrequent accidents instead of paying insurance). So the contract selects customers whom the insurer would not want to (they make him lose money), and does not like those who make him lose. Therefore this asymmetry of information is the origin of the marine insurance's higher costs and it results in hazardous moral problem which is an "unwanted effect" i.e. a non desired result and a tiresome regulatory system or a contract with a major legal flaw which opens wide possibilities of abuse, or even fraud, to those who want to take advantage of the regulation/the contract by diverting its spirit. The hazardous moral is the voluntary ability for someone to strategically take advantage of an unpredictable situation ignored by the system designers.

To resolve this issue, we believe that the insurer can check and improve his information about the agent, for example by including in the contract his former accidents that can inform about his quality as a carrier. It's the base of the bonus/overcharge system; and this may be possible only by requiring a technical control from the experts of the port States and classification companies who have the right to issue certificates of security for any type of vessels, that is why transport of petroleum products should be subject of strong inspection. However when it comes to pavilions of complacency, standards are not much respected which, in parallel, will lead the insurer to write down a two parts contract, inducing agents (here carriers) to be auto- selected, and thus to reveal upon their job titles.

Typically, such contracts include a bonus and a franchise. Under such conditions, it is possible to firstly suggest a strong premium and a low franchise contract which is chosen by the failing carriers, and a low premium and strong franchise contract, chosen by good carriers. We would call the first contract: participatory constraint and the second one incentive constraint.

XII. THE PRELIMINARY RISK ANALYSIS (PRA)

The preliminary risk analysis was developed in the early 1960s in the United States; the PRA has been taken over by the aviation industry. Dedicated to the identification of the risks represented by a system and the definition of the means (prevention, protection, procedures,) to control dangerous

identified situations, the PRA includes not only the security aspect but also the aspect of "exploitation" of systems.

The PRA method should allow many targets: first to rationally understand all the safety aspects by identifying risks and then to require immediate corrective actions in the best of efficiency conditions of speed and cost and to identify risks, justifying a further study, and finally to obtain, from earlier phases of research of development and conception, a sort of security analysis translated by operating instructions and safety, devices of control and regulation, means of protection, rules of equipment construction that may be an oil tanker.

XIII. THE TOTAL QUALITY APPROACH

This development addresses the impact of oil risk on the performance of maritime oil transport. Here the quality management is the prospect of internal adjustment of organizations. It is located in a management model, to absorb some shortcomings. This approach which is participative is applied, for the purposes of our analysis, to all economic agents involved in oil transport. We will follow this three-ways study: a theoretical orientation of the performance, a performance study by the total quality and its consequences on oil transport.

XIV. THE PERFORMANCE OF INDIRECT ACTORS

We would detail the contribution of ship classification companies, insurers and governments to manage the total quality of oil transport.

XV. THE QUALITY MANAGEMENT IN THE CLASSIFICATION COMPANIES

Classification companies are subject of caustic criticism from many professionals in the oil transport industry, in the sense that they are accused of issuing certificates of convenience to oil ship owners so as to satisfy insurance requirements.

These criticisms relate to the performed inspections. For the current methods of inspection and classification, we can rely on two ideas: the multiplicity of audits that do not produce reliable results and the lax of classification companies that classify ships under norms/standards. In response to these criticisms, the classification companies have begun moving responses to the management of quality of service they have been providing.

XVI. THE QUALITY MANAGEMENT OF MARITIME INSURERS

Insurers are accused of lacking rigour to insure ships under standards.

It is justified to advocate the participation of insurers in the management of the oil transport quality. The marine hull insurers and public liability are the only ones affected, in terms of oil carrier, taking into account the hull risk and public liability risk for marine pollution. The insurance policy towards under substandard ships is to get rid of them by leaving the serious risks. How?

By becoming more coercive on the imposed insurance clauses, insurers have introduced, in conjunction with the brokers, a clause that provides for the exclusion of vessels over 20 years, and the access to the classification registry. Tankers' hull insurers benefit from the support of London Joint Hull Committee, who introduced the policy.

Condition Warranty, used by the marine hull insurers when insurers have doubts about the structural integrity of a ship. If faced with the will to manage the quality of maritime oil transport, insurers choose to eliminate under standard ships; they also have the will to tax others. These insurers intend to give priority to oil quality tonnage.

For civil liability insurance: the P & I Club. Insurers take into account the participation of classification companies with which they have developed ties to strengthen inspections of oil tankers. This draconian policy is partly conducted by the tankers' hull insurance and by the insurers of risk of pollution, on the other hand.

XVII. PORT STATE CONTRIBUTION TO MANAGE THE QUALITY OF OIL TRANSPORT

For the ISM Code (International Safety Management) of the IMO (International Maritime Organization), port State intervenes in the management of quality in shipping. The ISM Code imposes the implementation of procedures for quality management and it tends to globalise their organization on the ground.

The code provides a number of provisions relating to the security and protection of the environment, the development of manuals procedures, the definition of the rules for better communicating between the ships and shore staff, the development of emergency procedures' reports system and other regular audits.

A. The Performance of Direct Oil Transport Actors

We focus here on the participation of shippers and traders (dealers) and Tanker Owners in managing the total quality of oil transport in Europe.

B. The Quality Management of Chatterers and Traders

The quality management, viewed by the chatterer, is done with the participation of oil traders. These are often integrated oil companies, which are major chatterers, in the marine tanker market. Traders are dealing within their business, owners and chatterers.

The risks are particularly crucial for integrated traders, given the involvement of their oil group, in case of accident. In addition to the concern inspired by the politics of environmental protection, oil companies take into account the impact on their image and financial risks arising from potential oil spills. All of these considerations call for the imperativeness of quality management which is applied to multiple areas with sufficient funding. In the choice of vessels, integrated traders apply a policy of selectivity which is primarily applied to the chartered vessels, and then the vessels enter the oil terminals operated by oil companies.

For British Petroleum (BP) the acceptability of a tanker is granted for a maximum period of two years, reduced to one year for tankers over 20 years old. This takes into account the elements contained in the database SIRE (Ship Inspection and

Report Exchange program) relative to petroleum tankers in doubt.

C. The Contribution of the Carrier to the Quality of Oil Transport Management

The owner manages the quality of oil transport taking into account three parameters: insurance, branding and qualification and training of personnel performing the operations of the tanker. The need for such insurance to the oil carrier is crucial.

This refers to the study of policies relating to new challenges imposed by environmental problems, the oil shipping industry- both from the point of view of the ship owner and that of the oil chatterer -concerning any risk of ecological disaster.

XVIII. CONSEQUENCES OF MARITIME OIL TRANSPORT

The total quality management, within the meaning of our analysis, requires the participation of all economic agents involved in this type of transport. And it is clear that the implementation of quality management in the oil transport generates increased costs for the carrier (including officers). These costs will be further aggravated by increases in operating costs. For example, the maintenance of a double hull oil tanker is twice more expensive than a single hull tanker.

But this increased cost must be offset by higher oil freight rates sufficiently remunerative to the oil amateur. These minimum requirements are the foundation of the beginning of investment programs to acquire new ships. This requires a reduction in the supply of oil transport, enabled by the elimination of the tanker fleet, the old under standard tankers.

But can we settle for market mechanisms to achieve this increase in highly profitable oil freight rates? We will found our reply on the earlier developments in the market. During the year 1991, which saw soaring oil freight rates, there was a rush for the acquisition of newly built vessels, while the demolition was postponed. Some professionals in the freight shipping tanker, approximately 125 new VLCC (Very large crude carrier) have been, by then, delivered since 1988, while fewer than 60 have been scrapped.

The result was the following observation: when demand had remained more or less stable between 1991 and 1993, the available capacity (in terms of supply) increased by 16% (18 million dwt), with deliveries of newly constructed vessels. This oversupply has pushed down oil freight rates. As a result, profits increased from the range of 12 000 USD - 16 000 USD per day in 1992 to $ 1994, and 8000 USD

12 000 USD per day.

This finding can be repeated in the future, regard to the cycles of maritime transport. We understand that, given these data and those mechanisms, the difficulty of relying solely on market forces to restore tanker freight rates, highly remunerative to the oil carrier, by eliminating oil tankers under standard.

Expecting oil carriers, to decide on demolishing under standard ships, then, proves here to be ineffective: the market goes up and stops the demolition because tanker freight rates become higher than the price of demolitions.

It is becoming less profitable to send oil to the case. Stopping demolitions resulting from increased oil freight rates involves the exploitation of oil tankers, even under standard, if the implementation of laws and total quality management becomes ineffective.

XIX. CONCLUSION

In this study, we have shown the impact of oil/nuclear maritime risk on the performance of oil shipping in general. This study was made on the basis of an analysis of the concepts of risk and performance. And the risks of maritime oil/nuclear transport are considered as new risks that, globally, we do not know how to cover them by the classical methods of prevention, insurance (or investment). The difficulty of covering oil risk insurance concerns the component: “risk of oil pollution.

The insurance of nuclear risk s is niche insurance but whose object is the heart of the business of insurance: pooling several entities located or operating in different countries, leave the possible charge over several years and actively participate through networks that can mobilize the insurance management compensation.

In fact, the insurance- as a taken measure to face certain hazards- must be regarded as an investment. Admittedly, it does not produce guaranteed income as a Treasury bill, but it can yield a substantial compensation when a disaster would occur.

The anti-selection is the issue of insurance which consists of, in exchange of a perception of quote-part or premium , providing a predefined financial service to an individual, an association or a company during a risk period. Thus, the main part -the insurer- will propose a maritime contract. For his contract he fixes a unique price p, because he cannot know the quality of his customers (good or bad carriers). In other words, let’s simplify it as the cost of the median oil ship accidents.

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Among all customers, the insurer will ensure all failing carriers; those whose accidents cost more than p, and only part of the goods which can bear the cost of their infrequent accidents instead of paying insurance). So the contract selects customers whom the insurer would not want to (they make him lose money), and does not like those who make him lose. Therefore this asymmetry of information is the origin of the marine insurance’s higher costs and it results in hazardous moral problem which is an "unwanted effect” i.e. a non desired result and a tiresome regulatory system or a contract with a major legal flaw which opens wide possibilities of abuse, or even fraud, to those who want to take advantage of the regulation/the contract by diverting its spirit. The hazardous moral is the voluntary ability for someone to strategically take advantage of an unpredictable situation ignored by the system designers.

To resolve this issue, we believe that the insurer can check and improve his information about the agent, for example by including in the contract his former accidents that can inform about his quality as a carrier. It's the base of the bonus/overcharge system; and this may be possible only by requiring a technical control from the experts of the port States and classification companies who have the right to issue certificates of security for any type of vessels, that is why transport of petroleum products should be subject of strong inspection. However when it comes to pavilions of complacency, standards are not much respected which, in parallel, will lead the insurer to write down a two parts contract, inducing agents (here carriers) to be auto- selected, and thus to reveal upon their job titles.

Typically, such contracts include a bonus and a franchise. Under such conditions, it is possible to firstly suggest a strong premium and a low franchise contract which is chosen by the failing carriers, and a low premium and strong franchise contract, chosen by good carriers. We would call the first contract: participatory constraint and the second one incentive constraint.

ACRONYM:

ISM Code International Safety Management Code

OECD: Organization for Economic Co-operation and Development

SOLAS Safety Of Life At Sea

STCW Standards of Training, Certification and Watchkeeping for Seafarers.

IMO:International Maritime Organisation

MARPOL:Marine Pollution Convention

VLCC: Very Large Crude Carrier

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